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FEDERAL - STATE COOPERATIVE
SNOW SURVEYS and WATER SUPPLY FORECASTS
for

OREGON

UNITED STATES DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
and
OREGON AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations. FEB. 1, 1957

UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

Snow surveys in the west are conducted each year at more than 1200 snow courses. Basin and Province or State snow survey reports summarizing the results of the measurements and forecasts of seasonal runoff and water supply are issued by the Soil Conservation Service, U. S. Department of Agriculture and some of its cooperators; the Water Rights Branch of the British Columbia Department of Lands and Forests; and the California Division of Water Resources.

Copies of the various federal-state cooperative snow survey reports listed below may be secured by writing to:

Head, Water Supply Forecasting Section Soil Conservation Service 209 S. W. 5th Avenue Portland 4, Oregon

BASIN REPORTS:

Colorado, Rio Grande, Issued monthly February through May by SCS and Colorado and Platte-Arkansas Experiment Station, Fort Collins, Colorado.*
Columbia River Issued monthly January through May by Soil Conserva- Basin tion Service, Boise, Idaho.*
Upper Missouri
West-Wide Water Issued April 1 by Soil Conservation Service and Co- Supply Outlook operators, Portland, Oregon.

STATE REPORTS:

Arizona	Issued semi-monthly January 15 through April 1 by SCS and Salt River Valley Water Users Association, Phoenix, Arizona.*
Nevada	Issued monthly February through April by SCS and Nevada State Engineer, Reno, Nevada.*
Oregon	Issued monthly January through May by SCS, Portland, Oregon, and Oregon Agricultural Experiment Station.*
Utah	Issued monthly January through May by SCS, Salt Lake City, Utah, and State Engineer of Utah and Utah Agricultural Experiment Station.*
Washington	Issued monthly February through May by SCS, Spokane, Washington, and State Department of Conservation and Development.*
Wyoming	Issued monthly February through May by SCS, Casper, Wyoming, and State Engineer of Wyoming.*

*Special reports are issued as needed.

The British Columbia reports are issued February 1 through June 1 and may be secured from Comptroller, Water Rights Branch, Department of Lands and Forests, Parliament Building, Victoria, B. C.

The California reports are issued monthly February 1 through May 1 and may be secured from Division of Water Resources, California Department of Public Works, Sacremento, California.

The annual water supply forecasts of the Weather Bureau are available in monthly bulletins published from January through May. These bulletins entitled, "Water Supply Forecasts for the Western United States" may be obtained from River Forecast Center, Weather Bureau, 712 Federal Office Building, Kansas City 6, Missouri.

FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND WATER SUPPLY FORECASTS

FOR

OREGON

Issued

February 8, 1957

Report Prepared

by

W. T. Frost, Snow Survey Supervisor and Manes Barton, Assistant Snow Survey Supervisor

Soil Conservation Service and Oregon Agricultural Experiment Station 209 S. W. 5th Avenue Portland 4, Oregon

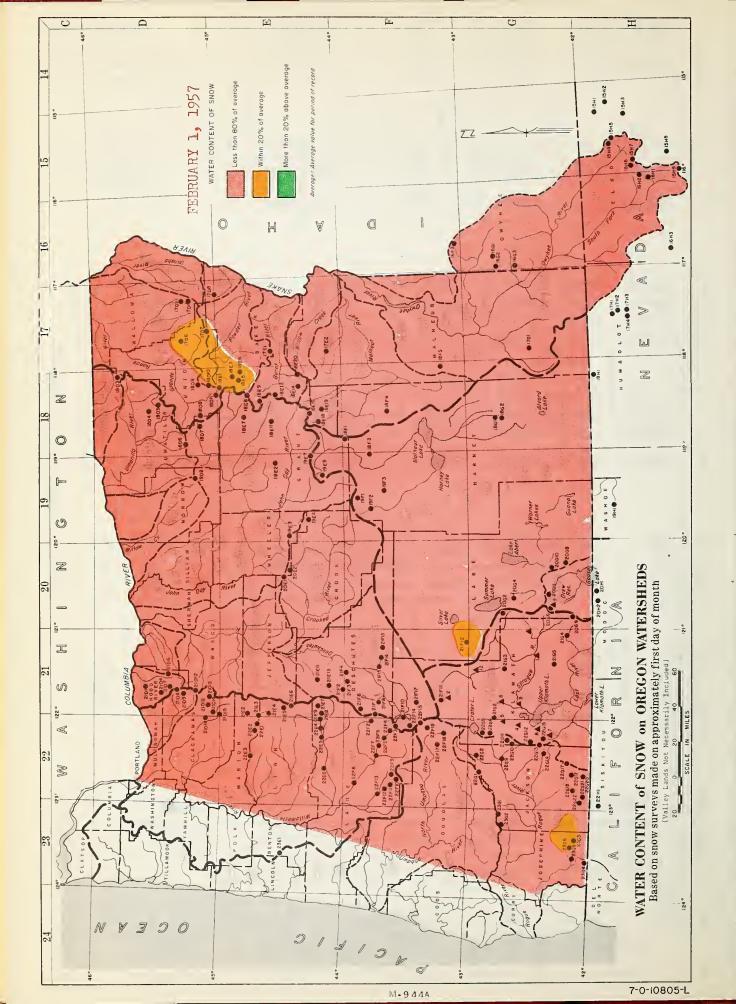
Issued by:

Harold E. Tower
State Conservationist
Soil Conservation Service

F. Earl Price
Director
Oregon Agricultural Experiment Station

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PRELIMINARY WATER SUPPLY OUTLOOK FOR OREGON

February 1, 1957

Oregon's 1957 water supply outlook, based on mountain snow-cover, has improved only slightly since January 1 but is still not good. Stored water supplies are mostly well above average except in the Umatilla watershed.

SNOW-COVER: Water content of mountain snow-cover as measured on 124 snow courses averages 70 percent normal compared with 145 percent normal last year at this date. Snow-cover varies from about half normal in the Mt. Hood area to near normal in the Siskiyou Mountains and Blue Mountains in Southeastern Union County.

Normally, about 65 to 70 percent of the total winter's snow is accumulated by February 1. The remaining winter months will need to produce <u>much</u> <u>above</u> <u>normal</u> snowfall to provide average water supplies this season.

- SOIL MOISTURE: Wetness of soils in mountain watersheds varies from extremely wet, as in the Owyhee and Goose Lake basins, to dryer than desirable, as in the Crooked and Umatilla basins.
- RESERVOIRED WATER: Stored water in 20 important irrigation reservoirs is now 126 percent of the 1938-52 average and 108 percent of last year at this date. Only four reservoirs are reporting below average storage. They are Antelope--85 percent, Agency Valley--73 percent, Cold Springs--74 percent, and McKay--50 percent.
- PRECIPITATION: State-wide precipitation last fall (September through November) averaged about 77 percent normal (1938-52). December and January have brought about 74 percent of the usual precipitation.
- STREAMFIOW: Present outlook for April-September streamflow is for below average runoff, except on the Illinois, Applegate, Klamath, Powder and Catherine Creek watersheds which will be near normal. See pages 2-6 of this report for detailed streamflow forecasts. Streamflow² during January has been about half normal except in the Klamath and Deschutes watersheds where ground-water contributions have held flows up to near normal.

1 From preliminary data furnished by U. S. Weather Bureau, Portland, Oregon.

²From preliminary data furnished by U. S. Geological Survey, Portland, Oregon.



The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature during the forecast period will be near average. Appreciable deviations from normal of temperature and/or precipitation during the forecast period will correspondingly modify these forecasts.

these forecasts.		Seasonal St	reamflow in	Thousands	of Acre	Feet
Basin, Stream	Forecast	%	Fore-	IIIO ROGILAD	01 110:0	15 - Yr,
and	Runoff	15-Yr.	cast	Measured	Runoff*	Average
Station	1957	Avg.	Period	1955	1954	1938-52
		UPPER COLUM	MBIA BASIN E IN OREGON			
Owyhee River Basin Owyhee Reservoir net inflow	400.0	70	Mar-July	258.8	137.5	569.5
Malheur River Basin Malheur River, nr. Drewsey	64.0	79	Apr-Sept.	36.7	44.4	81.5
Malheur River, N.Fk., at Beulah ²	52.0	81	Apr-Sept.	35.1	45.9	63.9
Burnt River Basin Burnt River, nr. Hereford ³	27.0	65	Apr-Sept.	18.1	23.0	41.8
Powder River Basin Powder River, nr. Baker	60.0	95	Apr-Sept.	32.9	39•9	63.4
Grande Ronde River Basin Imnaha River	250.0	82	Apr-Sept.	255.8	253.7	303.4
at Imnaha Wallowa River, E. Fk., nr. Joseph4	9.7	86	Apr-Sept.	10.3	11.3	11.3
Hurricane Creek nr. Joseph	35.0	78	Apr-Sept.	40.9	43.1	45.1
Lostine River, nr. Lostine	110.0	89	Apr-Sept.	103.8	118.5	123.5
Bear Creek, nr. Wallowa	61.0	88	Apr-Sept.	62.3	63.9	69.1
Catherine Creek nr. Union	65.0	91	Apr-Sept.	52.1	50.6	71.1
Grande Ronde River at LaGrande	115.0	65	Apr-Sept.	181.4	122.3	176.9

^{*}Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time. 1 From U.S.B.R. records of inflow.

²⁰bserved flow + change in storage in Agency Valley Reservoir.

³⁰bserved flow plus change in storage in Unity Reservoir. 4Includes power plant tailrace.

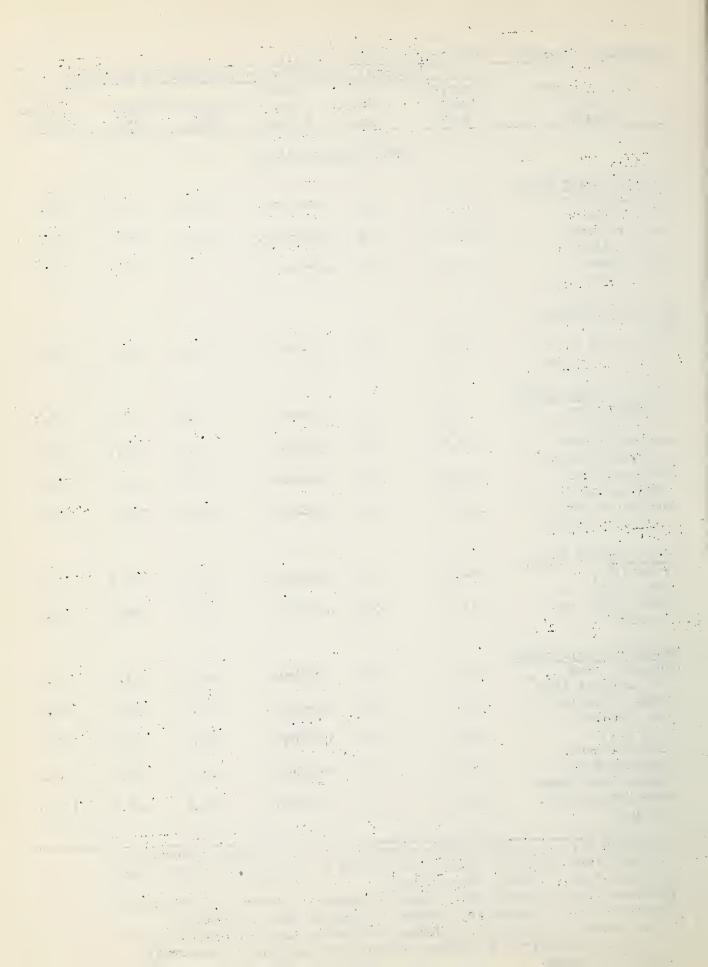
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Streamflow Forecasts - February 1, 1957 (Cont'd.) Seasonal Streamflow in Thousands of Acre Feet 15 - Yr. Basin, Stream Forecast Fore-Average Measured Runoff* and Runoff 15-Yr. cast 1938-52 Station 1957 Period 1955 1954 Avg. LOWER COLUMBIA BASIN Umatilla River Basin 106.6 72.6 86.8 Umatilla River, Apr-Sept. 84 73.0 nr. Gibbon Umatilla River, 215.2 117.7 167.4 148.0 88 Apr-Sept. at Pendleton McKay Creek Apr-Sept. 44.3 17.0 27.8 18.0 65 nr. Pilot Rock Walla Walla River Bastin 70.5 Waila Walla R., So. 56.0 Apr-Sept. 71.3 68.7 79 Fk., nr. Milton John Day River Basin Strawberry Cr. 7.7 8.3 Apr-Sept. 7.2 6.2 75 nr. Prairie City John Day River 37.6 42.5 50.4 43.0 85 Apr-Sept. at Prairie City John Day River, 92.8 121.7 86 Apr-Sept. 90.9 105.0 Mid.Fk. at Ritter 87 248.4 165.2 229.7 John Day River, 215.0 Apr-Sept. N.Fk., nr. Dale Crooked River Basin 124.2d 62.0 50 77.8 70.5 Crooked R.. Apr-Sept. nr. Post Ochoco Res., net 14.0 50 20.8 18.6 28.0 Apr-Sept. inflow Deschutes River Basin Crescent Creek Apr-Sept. 21.2 19.0 90 26.5 43.0 at Crescent Lake 7 89.6 69.1 Little Deschutes R., 62.0 69 134.4 Apr-Sept. nr. Lapine Odell Cr., 28.0 96 Apr-Sept. 28.7 37.5 29.2 nr. Crescent 60.4 Deschutes River, 88 Apr-Sept. 45.8 80.8 53.0 below Snow Creek Crane Prairie Res. 105.0 87 Apr-Sept. 94.1 149.9 120.6 inflow8

^{*}Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time. 50bserved flow + Prairie Power Canal.

Observed flow of Ochoco Cr. + Canal + changes in storage of Ochoco Res. 7Observed flow + changes in storage of Crescent Lake Reservoir.

⁸ From State Engineer's file #3220a, tabulating total inflow to Crane Prairie Reservoir and outflow, showing the loss in the Reservoir. d1938-39 excepted.



Streamflow Forecasts -	February 3	L. 1957 (Cd	ontid.)			4
	Se	easonal St	reamflow in	Thousands	of Acre	Feet
Basin, Stream	Forecast	%	Fore-			15 - Yr.
and	Runoff	15-Yr.	cast		Runoff*	Average
Station	1957	Avg.	Period	1955	1954	1938-52
Deschutes River Basin						
(Continued)						
Deschutes River	475.0	93	Apr-Sept.	575.8	697.9	511.0
at Benham Falls9						
Tumalo Creek	41.0	85	Apr-Sept.	48.6	59.8	48.3
nr. Bend ¹⁰					/a ~	
Squaw Creek,	44.0	89	Apr-Sept.	46.7	62.7	49.3
nr. Sisters	705.0	00		760 5	306 0	350.0
White River,	125.0	82	Apr-Sept.	170.5	176.3	152.0
below Tygh Valley						
Hood River Basin						
Hood River, W. Fk.,	130.0	8 8	Apr-Sept.	211.4	197.8	146.9
nr. Dee						
Hood River,	270.0	88	Apr-Sept.	424.0	399•4	306.1
nr. Hood Riverll						
Willamette River Basin	1					
Row River,	92.0	92	Apr-Sept.	168.9	84.5	100.5
nr. Dorena						
Mid.Fk. Willamette R.	720.0	90	Apr-Sept.	1071.0	823.1	798.3
Blw.No.Fk.,nr.Oakrid						
McKenzie R.,	<i>5</i> 2 5. 0	93	Apr-Sept.	689.8	668.8	564.7
at McKenzie Bridge						
McKenzie River,	1105.0	92	Apr-Sept.	1574.6	1336.4	1194.7
nr. Vida						
South Santiam,	530.0	95	Apr-Sept.	973.5	592.6	558.0
at Waterloo	770 0	00	A C t	1700 0	055	017 5
North Santiam at Mehamal2	770.0	92	Apr-Sept.	1122.9	955•4	841.5
Willamette River	4140.0	95	Apr-Sept.	7039.2	4902.6	4354.5
at Salem12	4140.0	7)	whr-pehe.	1037.2	4702.0	4334.3
Clackamas River,	140.0	86	Apr-Sept.	198.9	201.3	163.6
at Big Bottom			Mpr -bopo:	2/04/	2020	107.0
Oak Grove Fk.	160.0	86	Apr-Sept.	203.6	217.8	185.7
abv. Power Intake						
Clackamas River	505.0	84	Apr-Sept.	812.0	722.7	599.3
abv. Three Lynx						
Clackamas River	670.0	87	Apr-Sept.	1079.4	932.4	777.2
mm Canadana						

^{*}Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time.

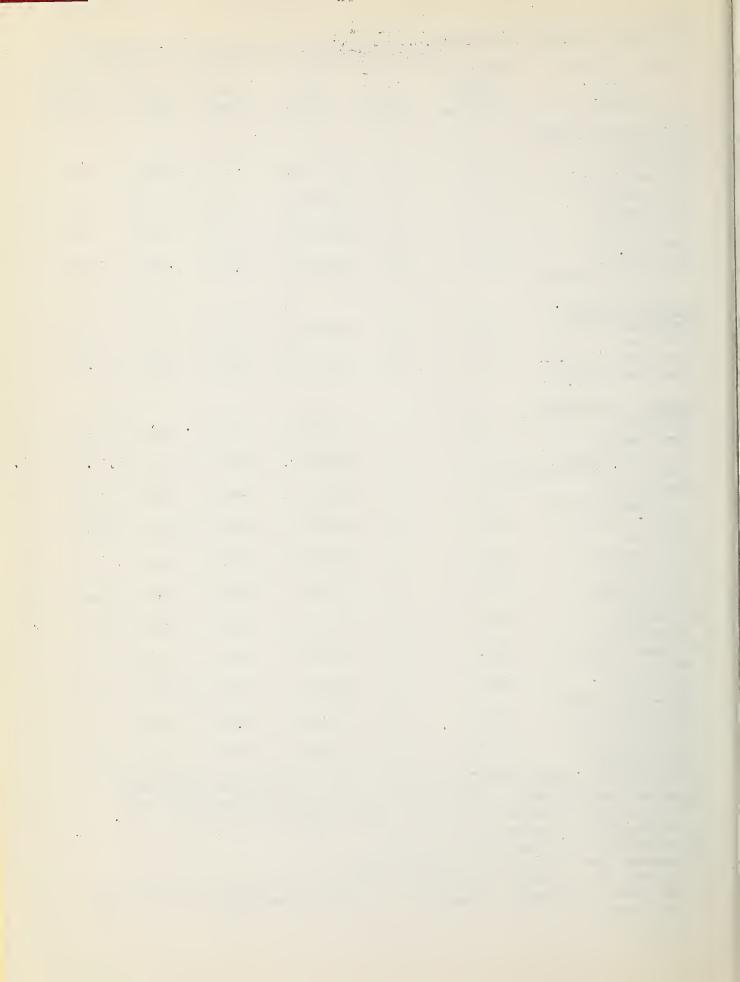
'90bserved flow + changes in storage in Crane Prairie, Wickiup and

Crescent Lake Reservoirs.

nr. Cazadero

¹⁰⁰bserved flow + Columbia Southern Canal.
110bserved flow + P. P. & L. Co. power canal.

¹²⁰bserved flow + changes in storage in any of the following reservoirs which are above the station: Lookout Point, Detroit, Fern Ridge, Cottage Grove and Dorena.



Streamflow Forecasts	- February 1	., 1957 (C	ontid.)	M	of Asso E	204
Basin, Stream	Forecast	sonal Str	eamflow in ' Fore-	rnousands	oi Acre re	15 - Yr.
and Station	Runoff 1957	15-Yr. Avg.		Measured 1955	Runoff* 1954	Average 1938-52
,	OREGON AN	D CALIFOR	NIA COAST B	ASINS		
Umpqua River Basin No. Umpqua River, below Lake Creek13	144.0	88	Apr-Sept.	146.2	218.0	164.0
Clearwater River, above Trap Creek	55.0	86	Apr-Sept.	69.9	86.2	64.2
Rogue River Basin Hyatt Res., net		·	Apr-Sept.	3.0	6.4	6.0
Inflow ¹ 4 Fourmile Lake,	No Snow		Apr-Sept.	8.3	3.5	7.0
net Inflow ¹⁵ Little Butte Cr.N.F. below Fish Lake ¹⁶	Sui	rveys Made	Apr-Sept.	23.9	25.6	14.9
Rogue R. So. Fk., nr. Prospect ¹⁷	65.0	85	Apr-Sept.	71.1	78.4	76.1
Rogue R. Mid. Fk., nr. Prospect ¹⁸	63.0	85	Apr-Sept.	73.8	83.0	74.3
Rogue River, above Prospect	275.0	87	Apr-Sept.	307.6	375.1	316.5
Rogue River, below South Fork	595.0	87	Apr-Sept.	653.0	741.2	680.8
Rogue R., at Raygold, nr. Central Point	790.0	86	Apr-Sept.	839.8	987.3	905.6
Rogue River, at Grants Pass	745.0	87	Apr-Sept.	859.1	967.9	852.8 ^d
Applegate River, nr. Copper	115.0	99	Apr-Sept.	80.4	154.7	
Illinois River,	180.0	99	Apr-Sept.	194.5	191.7	181.2

130bserved flow + storage changes in Lemelo #1 Reservoir.

at Kerby

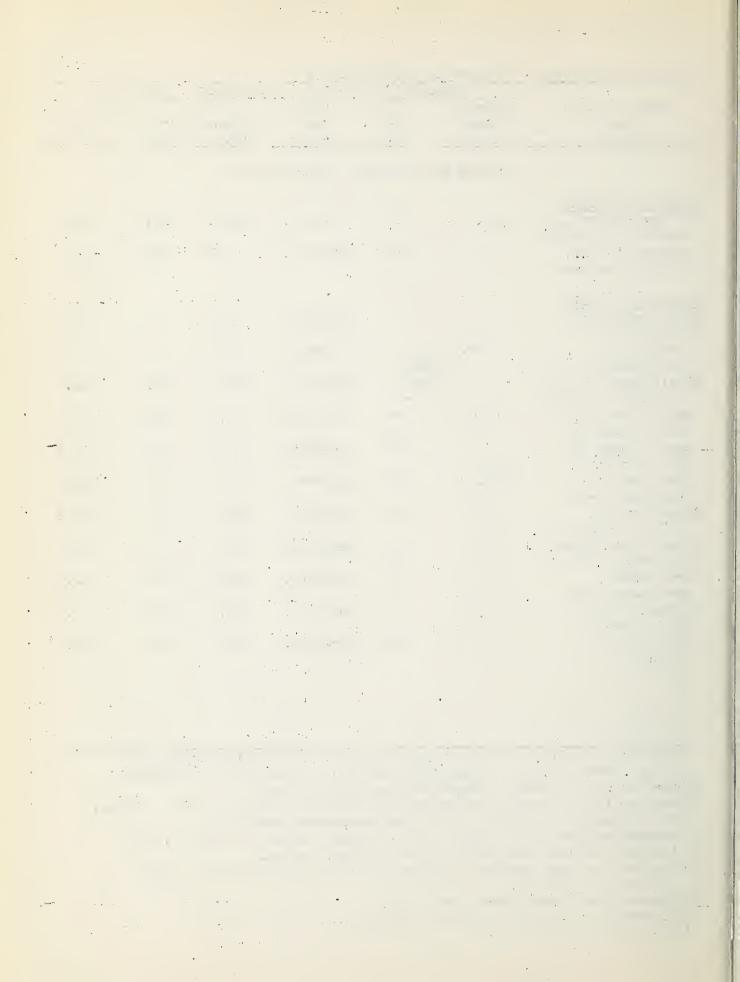
^{*}Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time.

¹⁴⁰bserved flow of Keene Creek at Hyatt Prairie + storage changes + 1600 a.f. for estimated evaporation during April-September period.

¹⁵⁰bserved outflow into Cascade Canal + storage changes + 1600 a.f. for estimated evaporation during April-September period.

¹⁶⁰bserved flow plus changes in storage in Fish Lake Reservoir + 90% of Cascade Canal inflow.

¹⁷⁰bserved flow + South Fork Power Canal. 180bserved flow + Middle Fork Power Canal. d1938 excepted.



102.3

Streamflow Forecasts	- February 1	, 1957 (C	ont'd.)						
Seasonal Streamflow in Thousands of Acre Feet									
Basin, Stream	Forecast	%	Fore-			15 - Yr.			
and	Runoff	15-Yr.	cast	Measured		Average			
Station	1957	Avg.	Period	1955	1954	1938-52			
Klamath River Basin									
Sprague River, nr. Chiloquin	260.0	103	Apr-Sept.	155.1	351.1	252.6			
Williamson River, below Sprague R.	410.0	101	Apr-Sept.	346.9	643.0	406.0			
Upper Klamath Lake, net Inflow19	525.0	100	Apr-Sept.	409.6	834.5	525.6			
Clear Lake Res., net Inflow	65.0	`75	Mar-July	49.0	66.9	86.3			
Gerber Res., net Inflow	32.0	76	Mar-July	21.8	42.0	42.0			
			BASIN DRAINAGE						
Goose Lake Basin									
Drew Reservoir, net Inflow	23.0	52	Mar-July	18.3	53.0	44.2 ^d			
Warner Lake Basin									
Twentymile Cr., nr. Adel	12.0	57	Apr-June	12.1	8.9	21.1e			
Deep Cr., above Adel	47.0	70	Apr-June	43.2	56.0	67.2			
Honey Cr., nr. Plush	10.5	67	Apr-June	7.9	13.7	15.6 ^f			

50

Apr-Sept. 42.0 51.7

51.0

Malheur and Harney Lakes Basin

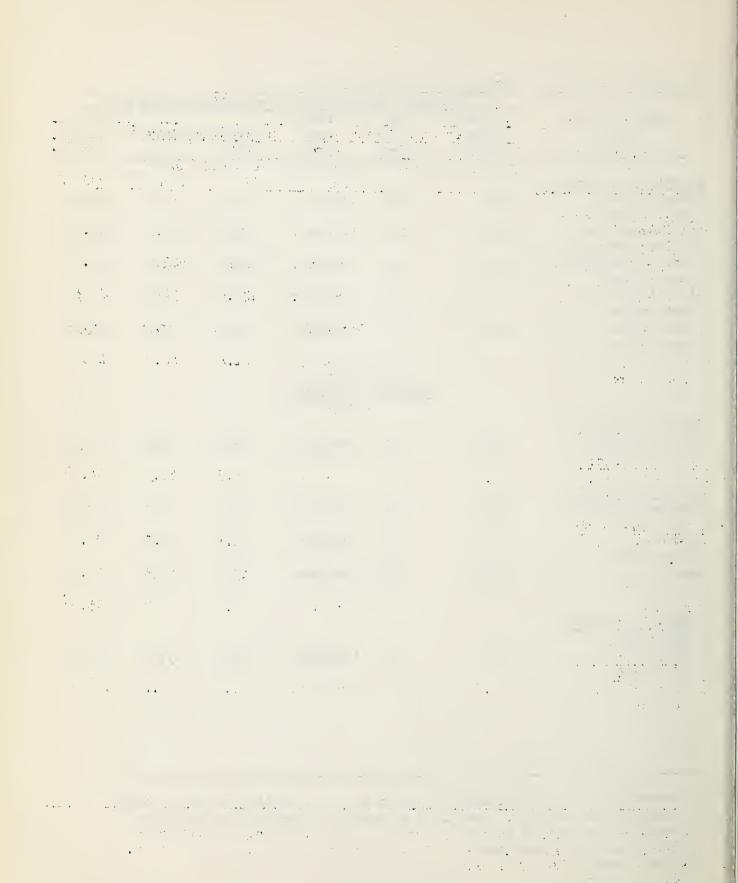
Silvies River,

nr. Burns

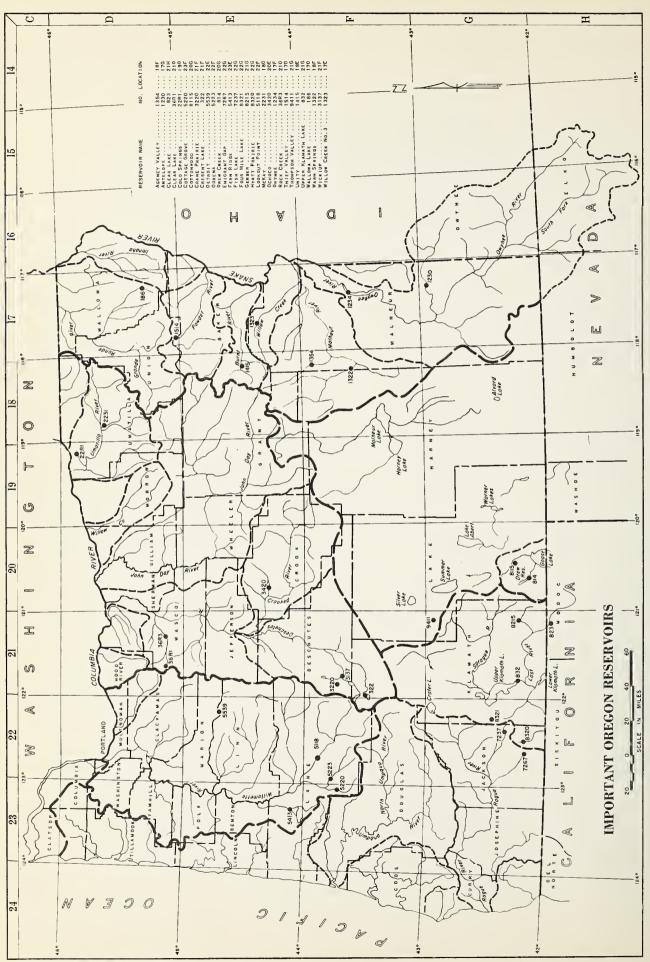
^{*}Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer. Most 1956 records not available at this time.

19From COPCO records of inflow.

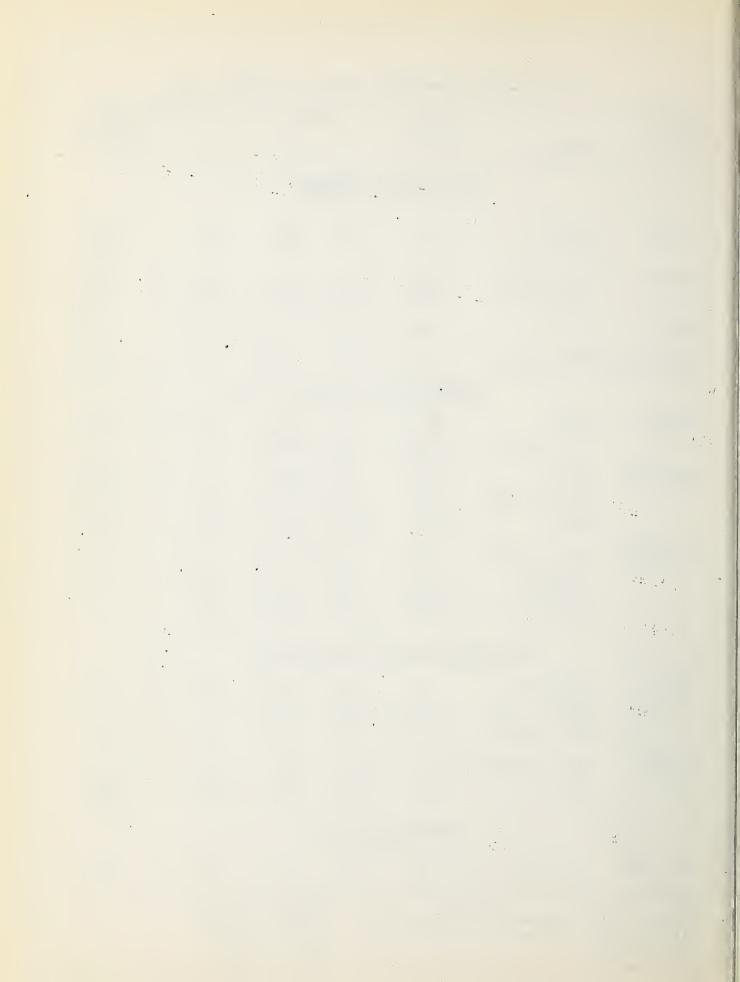
d1942-43 and 1945 excepted.
e1938-40 excepted.
f1942 excepted.







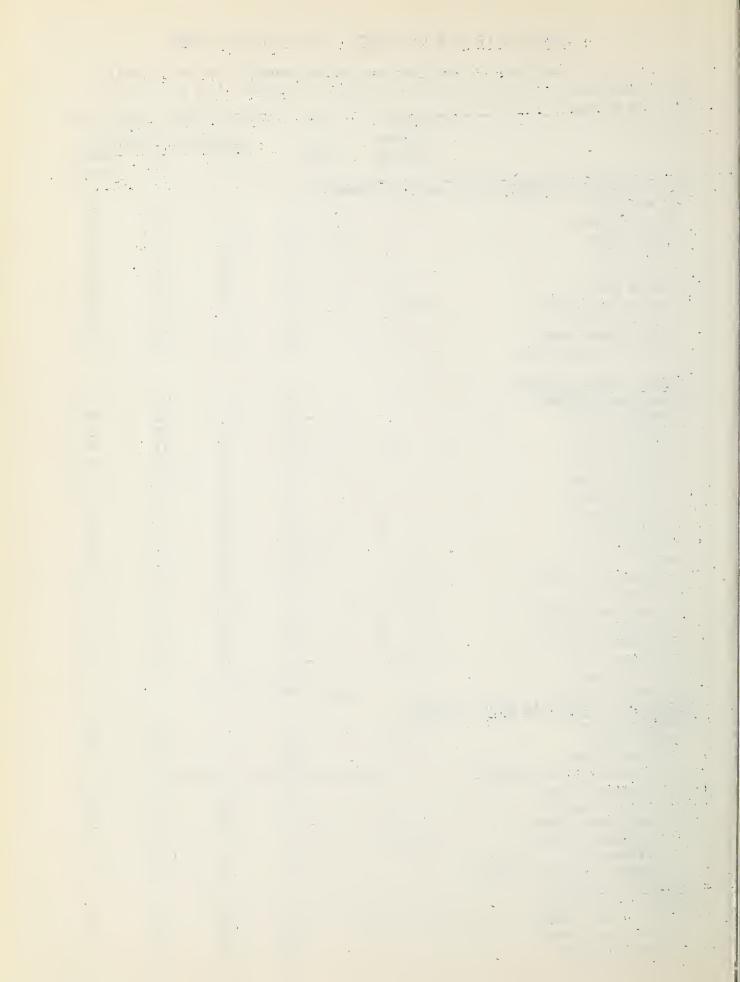
	STATUS OF OREGON	RESERVOIR	STORAGE	- FEBRUA	RY 1, 1957				
BASIN		USABLE	USA	BLE STORA	GE - 1000				
and/or STREAM	RESERVOIR	CAPACITY 1000s AF	1957	1956	1955	15-Yr.Avg. 1938-52			
UPPER COLUMBIA DRAINAGE Lower Snake in Oregon									
Owyhee	Antelope Owyhee	36.5 715.0	3.4 469.6	18.1 291.2	N.R. 169.9	4.0 ^b 456.4			
Malheur	Warm Springs Agency Valley	191.0 60.0	103.4 23.9	42.8 19.3	23.1 20.4	70.9 32.9			
Burnt	Unity	25.2	9.4	12.4	3.5	8.3°			
Grande Ronde	Wallowa Lake	40.9	33.4	24.8	17.8	19.4			
	LO	VER COLUMB	IA DRAIN	AGE					
<u>Umatilla</u>	McKay Cold Springs	74.0 50.0	17.1 22.0	48.0 35.3	9.0 18.0	34.5 29.6			
Deschutes	Ochoco Crescent Lake Crane Prairie Wickiup	46.0 54.9 55.3 203.0	24.4 64.1 55.0 200.1	30.8 36.8 48.0 137.0	21.7 24.3 45.1 198.3	18.9 39.8 ^d 34.1 ^e 95.3 ^f			
<u>Willamette</u>	Cottage Grove Dorena Fern Ridge Detroit Lookout Pt.	30.1 ^a 70.5 ^a 94.2 ^a 340.0 ^a 350.0 ^a	0.0 0.6 0.0 0.0 14.6	0.0 0.6 1.0 10.2 5.4	0.2 0.6 1.0 2.0 12.1	0.1 ^f 15.2 ^g 			
	OREGON ANI	CALIFORN:	IA COAST	DRAINAGE					
Rogue	Fish Lake Fourmile Lake Emigrant Gap Hyatt Prairie	7.8 16.1 8.3 16.1	6.4 N.R. 6.6 ll.7	4.5 6.4 7.9 5.0	5.4 9.3 1.4 9.7	4.4 6.7 5.1 4.8			
<u>Klamath</u>	Upper Klamath L. Gerber Clear Lake	584.0 94.0 440.2	386.8 52.0 301.3	498.6 59.4 320.5	316.6 27.2 220.5	340.3 31.3° 189.8°			
		INTERIOR 1	DRAINAGE						
Goose Lake	Cottonwood Drew	4.1 62.5	N.R. N.R.	2.9 62.5	N.R. 24.3	0.1 ^h 35.2 ⁱ			
N.R No Report aStorage space reserved for flood control b1943 and 1952 excepted c1938 excepted c1938 excepted d1952 excepted i1946 excepted									



COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Oregon stream basins presents the water content of the snow about February 1, 1957 as percent of the same date in 1956 and 1955 and average.

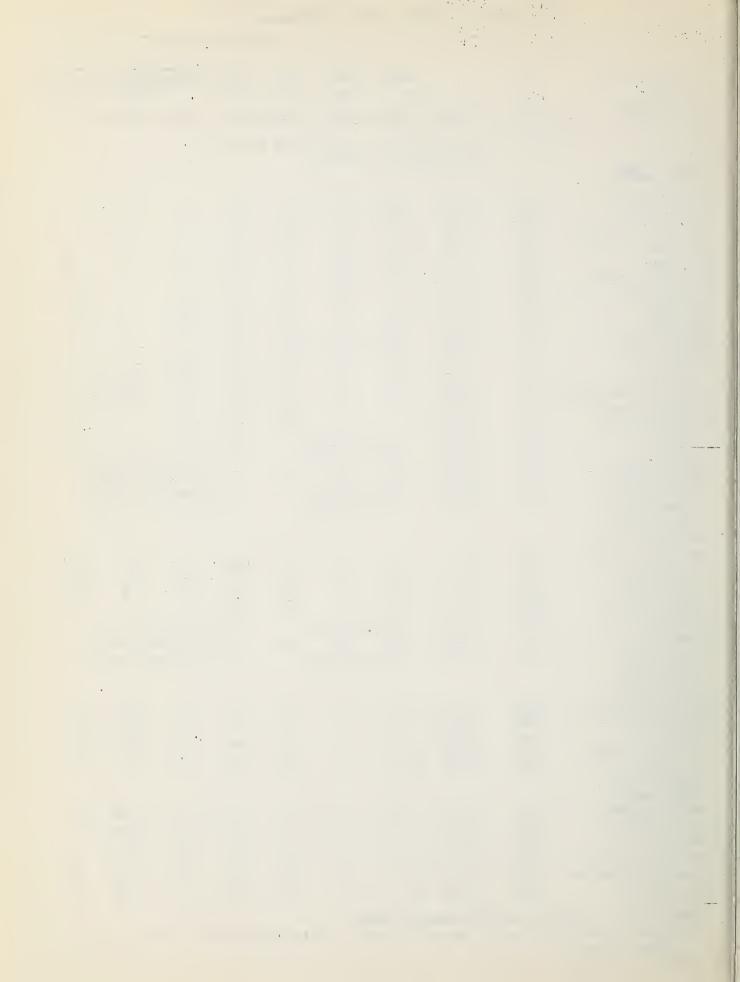
1777 and average.	No. of	Yrs.	February 1, 1957 Water			
DRAINAGE	Courses	of			rcent of	
	Averaged	Record	1956	1955	1938-52	
UPPER COLUMBIA DRAINAGE (Low	on Snake in O	accen l			Average	
Owyhee River	2 - 6	5 - 12	52	100	68	
Malheur River			53			
Burnt River	3	14 - 15	43	79	63	
Powder River	4	13 - 15	41	82	56	
Pine Creek	4 5 1 2	12 - 14	62	126	84	
	1	15	32	85	51	
Imnaha River		11 - 15	55	144	78	
Grande Ronde River	10 - 11	5 - 15	59	111	80	
Wallowa River	2	11 - 15	55	144	78	
Catherine Creek	1	15	89	160	119	
Main Grande Ronde	6 - 7	5 - 15	54	87	72	
LOWER COLUMBIA DRAINAGE						
Walla Walla River	1	15	58	91	73	
Umatilla River	- 5	13 - 15	46	62	60	
Willow Creek	5 1	15	31	57	45	
John Day River	12	5 - 15	47	93	68	
North Fork		5 - 15	52	103	75	
Middle Fork	6 3 3 1 3	15	49	105	76	
Main Branch	3	15	40	80	59	
South Fork	í	15	38	73	55	
Crooked River	3	14 - 15	51	86	55	
Deschutes River	8 - 16	5 15	45	83	55 68	
Hood River	3 - 5	5 - 15	33	51	44	
Willamette Valley	11 - 33	5 - 15	53	78	67	
Sandy River	2 - 3	5 - 15	37	63	54	
Clackamas River	ĩ - 4	5 - 15	40	70	42	
Santiam Rivers	3 - 7	5 - 15	52	79	60 60	
McKenzie River	3 - 8	5 - 15	61	90	75	
Middle Fork	4 - 10	5 - 1 5	53	76	76	
Coast Fork	1 - 5	5 - 14	77	76 54	54	
Mary's River	•	Snow Surveys			24	
OREGON AND CALIFORNIA COAST	DRATNACE	Dilow Durveys	derayed			
Umpqua River	4 - 5	8 - 14	63	85	71	
Rogue River	9 - 10	7 - 15	61	93	75	
Upper Rogue	5	7 - 15	52	88 88	70	
Bear-Little Butte Creek	•	ow Courses n			70	
Applegate River					Ø0.	
Illinois River	1 2	14	46	75	89	
Klamath Lake Basin	16 - 17	7 75	55 52	83	90	
Williamson River	10 - 17	7 - 15	52 50	91	77	
Sprague River	6 - 8	7 - 15	50	96	75	
Gerber-Clear Lake Basin	2 - 4	7 - 15 5 - 15	72	101	92 65	
INTERIOR DRAINAGE	~ - 4) - 1)	59	77	95	
Goose Lake Basin	2 - 4	77 75	20	70	40	
Warner Lake Basin	- •	7 - 15	37	70	63	
Silver Lake Basin	1	14	30 68	61	57	
Chewaucan River	1	12	68 50	130	69	
Harney Basin	6 - 7	14	52	68	71	
	0 - /	15	38	70	57	



-							•		
					OW COVE	R MEASU			
				1957			Past F		
DRAINAGE BASIN	No.		Date	Snow	Water		· Conte	ent(In.)	Previou
and	or	T32	of		Conten		3055	1938-52	Yrs. of
SNOW COURSE	State	ETEA.	Survey	(In.)	(1n.)	:1956	1955	Avg.	Record
<u>n</u> i	PPER	COLU	MBI	A DR	AIN	AGE			
		LOWER S	NAKE IN	OREGO	4				
OWYHEE RIVER									
Granite Peak	17H4	7800	Repo	rt dela	aved	15.8			1
*Bear Creek	15H1	7800	1-28	49	12.8	18.0	9.2		2
Upper Jack Creek	16H2	7250	2-1	25	6.9	7.5			1 2 2 1
76 Creek	15H3	7100	1-30	23	4.9	13.2	5.2		2
*Fox Creek	15H2	6800	1-28	22	4.7	6.3	4.3		2
Lower Jack Creek	16H1	6800	2-1	12	2.7	3.2			
*Rodeo Flat	15H6	6800	1-31	17	3.9	7.0	5.0		7
Big Bend	15H4	6700	1-31	17	4.1	11.2	3.4		8
*Fry Canyon Martin Creek	15H7	6700	1-31	16	3.5	7.8	5.1		7
Gold Creek	17H3	6700 6600		rt dela	•	10.0			1
Silver City	15H5 16F3	6400	1-31	12	2.9	6.7 12.4	2.3	10.2**	9
South Mountain No.2		6340	2-3 1-28	43		11.6	7.8 6.6	9.1%	16
Taylor Canyon	15H9	6200	2-1	24 10	5.6 1.8	7.9	0.0	9•±~~	1
*Tremewan Ranch	15H8	5700	2-1	7	0.8	2.8	1.5		2
Cliffs	16G2	5200		measure		3.3			ĩ
Lowery Ranch	16G3	4800		measure			Previo	us Reco	
Shumway Ranch	17F1	4500	1-25	12	1.8			ous Recor	
Highway Camp	17G1	4300	_	measure				us Recor	
Barren Valley	18F5	4200		measure				ous Recor	
MALHEUR RIVER									
	2 4 - 2 /								
Blue Mtn. Spgs.	18E16	5900	1-30	26	6.6	14.6	7.0	10.2	25
Rock Spring	18F1	5100	1-31	14	1.5	7.3	3.6	4.3	21
Stinking Water Eldorado Pass	18F4	4800	2-1	15	3.3	4.4	3.9	3.6	18
Bonita	18E20	4600	1-29	10	1.5	3.0	The same of	 Da	1
Shumway Ranch	17E3 17F1	4600 4500		measure				ous Recor	
Clover Creek	17E2	4100	1-25	12	1.8			ous Recor	
	±1 ±4	4100	NOC :	measure	g	NO	LLGATO	ous news	ra
BURNT RIVER									
Dooley Mountain	17E1	5430	1-30	14	2.4	7.5	4.6	6.6**	18
*Gold Center	18E8	5340	2-3	29	6.1	10.7	5.4	8.4**	17
Tipton	18E9	5100	1-29	18	3.3	11.4	5.7	7.4**	
Blue Mtn. Summit	18E13	5098	1-31	21	4.2	9.1	3.8	6.1	22
Eldorado Pass	18E20	4600	1-29	10	1.5	3.0			1
POWDER RIVER									
Anthony Lake	18E1	7125	1-25	55	15.4	26.5	11.8	19.1**	16
Goodrich Lake	18E6	6775		rt dela		32.9	10.5	29.2**	
Bourne	18E5	5800	2-1	45	10.3b	15.7	7.8	9.6**	
Dooley Mountain	17E1	5430	1-30	14	2.4	7.5	4.6	6.6**	
Eilertson Meadows	18E3	5400	2-3	34	9.1	9.4	4.8	8.1**	
*Gold Center	18E8	5340	2-3	29	6.1	10.7	5.4	8.4**	17

^{*}Not located directly on this drainage area.

**Average is for less than 15 years of record in the 1938-52 period but not less than 5 years. bPartly estimated.

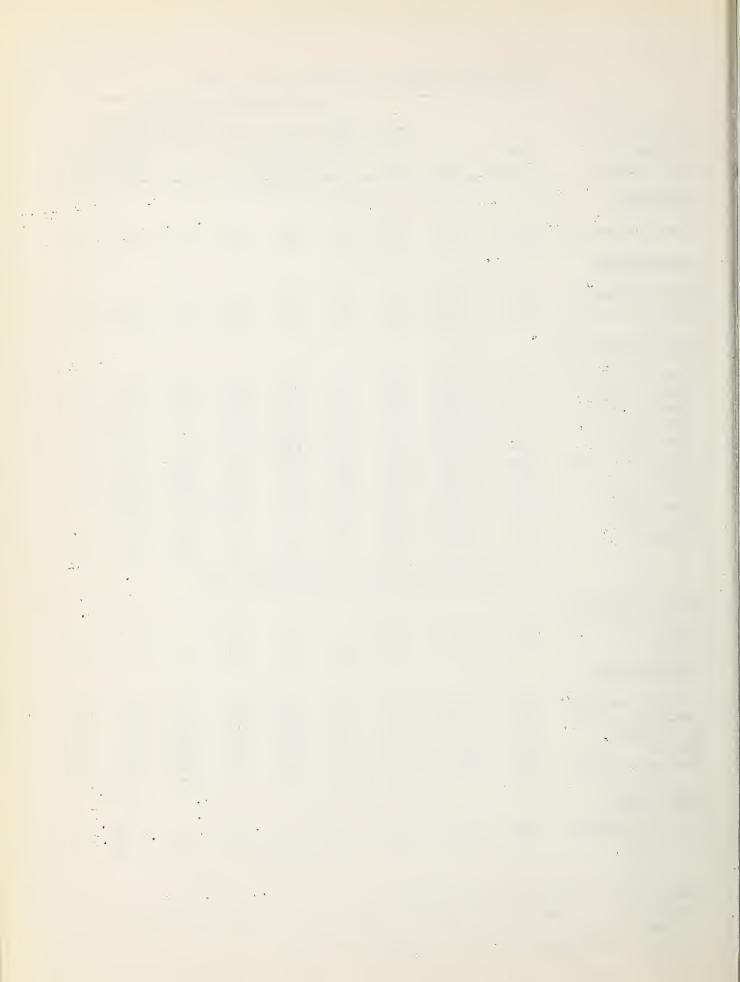


				Si	NOM COAI	ER MEAS			
DRAINAGE BASIN	No.		Date	1957 Snow	Water	·Water		Record nt(In.)	Previo
and	or		of		Content	THE RESERVE OF THE PERSON NAMED IN		1938-52	
SNOW COURSE	State	Elev.	Survey	(In.)		:1956	1955	Avg.	Record
PINE CREEK									
Schneider Meadows	17D8	5400	1-30	59	10.5	32.6	12.4	20.5	19
IMNAHA RIVER									
*Aneroid Lake No. 1 *Aneroid Lake No. 2	17D1 17D2	7480 7000	2-2 2-2	68 57	18.0 14.5	33.4 26.1	12.8 9.8	22.4 19.2**	26 15
GRANDE RONDE RIVER									
Aneroid Lake No. 1 Anthony Lake Aneroid Lake No. 2 Camp Carson Moss Spring Beaver Reservoir Tollgate *Lucky Strike County Line Schoolmarm Meacham	17D1 18E1 17D2 18D11 17D6 18D9 18D3 18D6 18D8 18D7 18D5	7480 7125 7000 5970 5850 5340 5070 5050 4800 4775 4300	2-2 1-25 2-2 1-31 2-1 1-29 1-31 1-25 1-26 1-31	68 55 57 26 67 19 43 24 15 15	18.0 15.4 14.5 6.4 18.5 4.5 12.4 4.2 3.8 2.9 3.8	33.4 26.5 26.1 9.6 20.9 10.3 21.4 11.6 5.6 5.0 8.0	12.8 11.8 9.8 c 11.6 5.2 13.6 6.1 4.4 4.5 8.2	22.4 19.1** 19.2** 7.3** 15.5 8.5** 16.9 8.4** 3.0** 6.1	15 13 19 18 25 17 5
	LOWE	<u>R</u> <u>C</u>	O T M	B I A	DRA	I N A G	E		
WALLA WALLA RIVER									
Tollgate	18D3	5070	1-31	43	12.4	21.4	13.6	16.9	25
UMATILLA RIVER									
Arbuckle Mountain Tollgate Lucky Strike Meacham Emigrant Springs	19D2 18D3 18D6 18D5 18D4	5400 5070 5050 4300 3925	1-29 1-31 1-25 1-31 1-31	16 43 24 21 16	3.4 12.4 4.2 3.8 2.6	11.0 21.4 11.6 8.0 5.3	6.0 13.6 6.1 8.2 8.5	7.6*** 16.9 6.1 5.3	27 25 17 28 28
WILLOW CREEK									
Arbuckle Mountain	19D2	5400	1-29	16	3.4	11.0	6.0	7.6**	27

^{*}Not located directly on this drainage area.

^{**}Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

cWater content not measured due to loss of equipment.

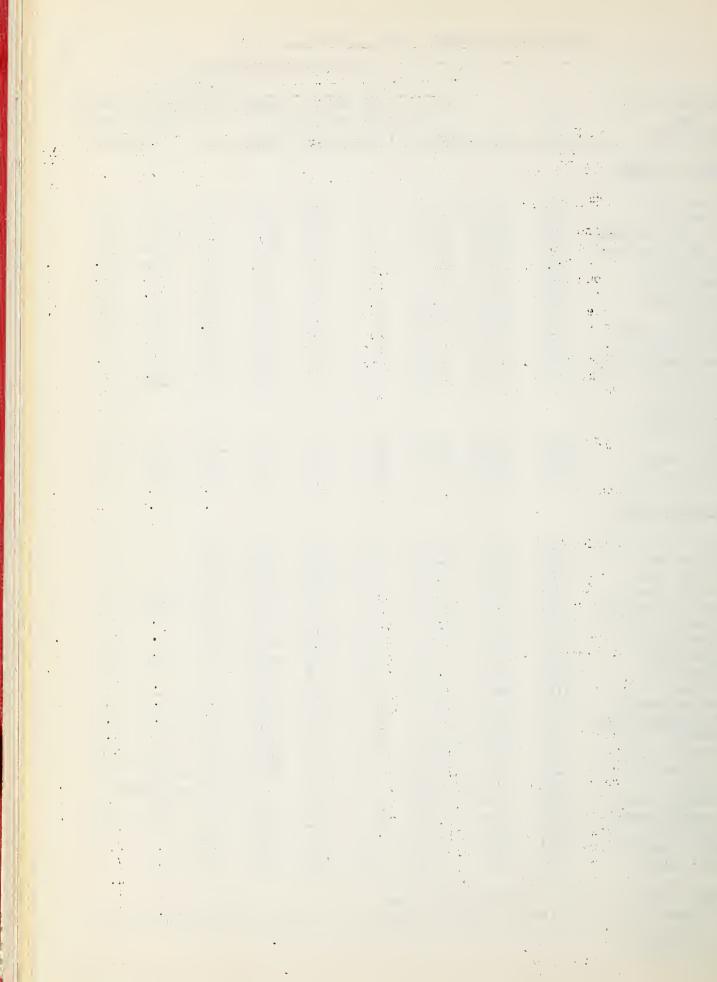


				SI 1957	NOM COAL	ER MEAS		MS Record_	
DRAINAGE BASIN	No.		Date	Snow	Water	:Water		ent(In.)	Previou
and	or		of		Content			1938-52	,
SNOW COURSE	State	Elev.	Survey	(In.)	(In.)	:1956	1955	Avg.	Record
JOHN DAY RIVER									
*Anthony Lake Olive Lake Blue Mtn. Springs Arbuckle Mountain Gold Center *Izee Summit Starr Ridge Tipton Blue Mtn. Summit *Lucky Strike	18E1 18E7 18E16 19D2 18E8 19E9 19E7 18E9 18E13 18D6	7125 6000 5900 5400 5340 5293 5156 5100 5098 5050	1-28 2-1 1-30 1-29 2-3 1-31 1-29 1-31 1-25	55 39 26 16 29 18 12 18 21 24	15.4a 11.4a 6.6 3.4 6.1 3.3 2.1 3.3 4.2 4.2	26.5 18.0 14.6 11.0 10.7 8.6 7.5 11.4 9.1 11.6	11.8 8.5 7.0 6.0 5.4 4.5 3.0 5.7 3.8 6.1	19.1** 11.4 10.2 7.6** 8.4** 6.0 4.3 7.4** 6.1 8.4**	21 25 27 17 20 20 20 22 17
Beech Creek Summit Schoolmarm	19E2 18D7	4800 4775	1-30 1-26	13 15	2.3	5.4 5.0	3.8 4.5	4.3 3.0**	19 9
CROOKED RIVER									
Derr Ochoco Meadows Mark's Creek	19E3 20E2 20E1	5670 5200 4540	1-31 2-1 2-1	16 25 18	3.6 4.1 2.5	7.8 8.6 3.5	4.7 4.4 2.8	6.7 7.9** 3.9	19 27 19
DESCHUTES RIVER									
New Dutchman Flat Paulina Lake Windigo Pass Charlton Lake Three Creeks Mdws. Willamette Pass Irish-Taylor *Waldo Lake Tangent Fire Road Cascade Summit New Crescent Lake *Chemult Crescent Lake Hogg Pass Mowich Black Pine Spg. Caldwell Ranch Hungry Flat Paulina Prairie Clear Lake	21F2 21F13 22F15 21F7 21E13 22F14 21F6 22F2 21F3 21F14 22F3 21F10 21F11 21F9 21E6 21F17 21E11 21F8 21E4 21F15 21D12	6400 6330 5800 5750 5600 5500 5500 5400 5050 4880 4760 4760 4760 4400 4400 4400 4285 3500	1-24 1-25 1-31 1-29 1-23 2-1 1-30 1-25 2-1 1-31 1-31 1-31 1-30 1-23 1-23 1-23	78 41 73 33 20 77 54 42 28 16 57 24 19 20 63 18 11 17 17	24.0 10.4 22.6 10.3 4.5 22.2 17.2 12.9 6.6 2.4 15.0 5.3 4.7 5.1 20.2 3.9 1.3 3.4 3.0 2.2 3.9	29.2 17.3 13.5 14.6 37.4	16.4 9.2 20.8 20.1 16.6 10.5 4.8 16.9 9.5 5.7 10.0 22.1 Previous 2.7 7.2	20.5 8.4 8.3*** 27.4 ious Rec 8.0***	24 7 5 10 5 2 26 4 20 19 19

^aTelegraphic

^{*}Not located directly on this drainage area.

**Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.



		SNOW COVER MEASUREMENTS								
				***************************************	1957			Past Record		
	DRAINAGE BASIN	No.		Date	Snow	Water		Conte	1938-52	Previous
	and SNOW COURSE	or State	Elev.	of Survey		Content (In.)				Record
1	HOOD RIVER									
	Tilly Jane Phlox Point Red Hill Still Creek Clear Lake	21D7 21D8 21D4 21D9 21D12	6000 5600 4400 3700 3500	1-20 1-31 1-30 1-31 1-30	41 58 37 30 17	11.6 21.2 9.5 7.6 3.9	35.6 51.8 39.3 23.2 14.3	21.3 32.7 33.1 13.5 5.3	37.9** 37.9 15.6	9 19 8 19 6
	Greenpoint Res.	21D1	3400	_	rt dela		22.3	8.8	19.0%	9
	WILLAMETTE VALLEY S' SANDY RIVER ¹	TREAMS								
	Phlox Point Still Creek *Clear Lake	21D8 21D12	5600 3700 3500	1-31 1-31 1-30	58 30 17	21.2 7.6 3.9	51.8 23.2 14.3	32.7 13.5 5.3	37.9 15.6	19 19 6
,	CLACKAMAS RIVER *Clear Lake Peavine Ridge Timothy Lake Big Bottom Lake Harriet Snow Line: Approxi-	21D12 21D14 21D18 21D15 21D16 mately 1	3500 3500 3295 3118 2045	1-30 1-25 1-25 1-26 1-26	17 24 21 19 13	3.9 5.0 3.8 3.8 2.5	14.3 14.1 10.9 	5.3 9.5 4.3 2.5		6 19 1 5 6
	Hogg Pass Santiam Junction Marion Forks Whitewater Bridge Detroit (new town) Detroit Dam Mill City Snow Line: Approxi	21E6 21E5 21E4 21E3 22E1 22E2 22E3 mately 1	4755 3990 2730 2175 1500+ 1580 826		63 33 24 18 7 7	20.2 9.2 5.1 3.0 2.0 1.3	37.4 20.9 11.0 6.0 1.7 1.3	22.1 14.7 8.8 4.0 2.2 0.0 0.0		
	McKENZIE RIVER McKenzie Hogg Pass Santiam Junction Dead Horse Grade White Branch Slide Lost Creek Ranch McKenzie Bridge Vida Snow Line: Approxi	22E4 22E5 22E6	4800 4755 3990 3800 2800 1956 1372 800	2-4 1-31 1-31 2-4 2-4 2-4 2-4 2-4	75 63 33 40 27 16 10	24.9 20.2 9.2 9.5 5.8 4.5 2.8 0.0	42.7 37.4 20.9 15.5 5.9 3.8 0.5	22.1 14.7 14.2 5.7	27.4 18.6** 	19

than 5 years.

Not strictly a part of the Willamette Drainage; these surveys are indicative of west slope conditions.

^{*}Not located directly in this drainage area.
**Average is for less than 15 years of record in the 1938-52 period but not less

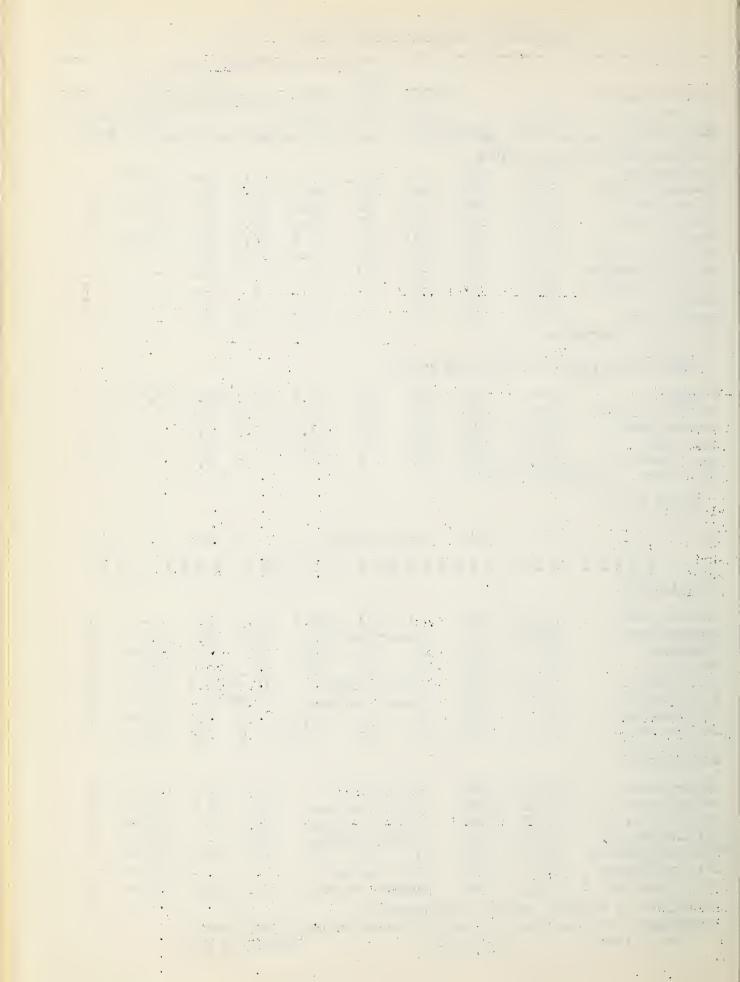
the state of the s eloni. Alabaik let 14 . 3.52 * in which is the second 4 (0.45 g) 2 Land State -÷ : . • And the second of the second o the first of the state of the s

			SNOW COVER MEAS								
	DDATMACE DASTN	NT-		Dot -	1957	T-7- 4	- Notes		Record	Dnorri	
	DRAINAGE BASIN and	No.		Date	Snow	Water Content				Previou Yrs. of	
	SNOW COURSE	State	Elev.	Survey	(In.)		:1956			Record	
				Jai vojy	(3410)	(2116)	//	-///		110001 0	
MIDDLE FORK WILLAMETTE RIVER											
•	*Charlton Lake	21F7	5750	1-29	33	10.3	27.7	16.4	13.2**	9	
	Willamette Pass	22F14	5600	2-1	77	22.2	35.9	20.8	71 644	7	
	Waldo Lake	22F2	5500	1-29	42	12.9	28.0	16.6	14.6**	10 26	
	Cascade Summit Champion	22F3 22F9	4880 4500	2 -1 1 -3 1	57 37	15.0 9.2	29.2 18.3	16.9	20.4		
	Salt Creek Falls	22F4	4000	2-1	32	7.4	14.4	10.8		7	
	Railroad Overpass	22F5	2750	2-1	13	5.0	0.8	3.8		7	
	McCredie Spring	22F6	2120	2-1	T	T	T	1.0		7	
	Oakridge	22F7	1310	2-1	ō	0.0	0.0	0.0		7	
	Meridian Dam	22F8	750	2-1	0	0.0	0.0	0.0		6	
	Snow Line: Approxi	mately 2									
	COAST FORK WILLAM	ETTE RIV	ER (Ro	w River)							
	Champion	22F9	4500	1-31	37	9.2	18.3	22.0	17.0%%	18	
	Golden Curry Cr.	22F10	3136	1-31	18	4.4	2.4	6.0		7	
	Weaver Creek	22F11	2440	1-31	10	1.8	0.5	2.2		6	
	Lund Park	22F12	1740	1-31	6	1.0	T	T		7	
	Layng Creek R.S.	22F13	1200	1-31	T	T	0.0	0.0	-	8	
	Snow Line: Approxi	mately 1	.2001								
	MARY'S RIVER										
٠	Mary's Peak	23E1	3620	Not	measure	ed		8.3	5.8**	14	
	OREGON	AND	C A T.	IFOF	NTA	CO	AST	DRA	INA	G FR	
,		7 7 7	7 7 T	TTOI	7 77 7	2 2 2	2 2 1	5 17 12	n - :	Z =	
	UMPQUA RIVER										
	Windigo Pass	22F15	5800	1-31	73	22.6	41.3	21.1		6	
	Diamond Lake	22F18	5315	_	rt dela	ayed	20.3	12.2	14.8	27	
	Whaleback	22Gl	5140	2-2	59	16.0	31.4	19.1	23.8**		
	Champion	22F9	4500	1-31	37	9.2	18.3	22.0	17.0%*		
	North Umpqua	22F16	4215		ort dela		14.42	10.2	8.2**		
	Trap Creek	22F17	3800	_	ort dela	ayed	9.80	&c	10.3**		
	Goolaway Mtn.	23G2	3780	2-1	32	7.7ª	4.0	6.0	4.3**		
	Goolaway Gap	23G1	3050	2-1	19	5.2ª	1.0	2.8	1.8***	12	
	ROGUE RIVER										
	Wagner Butte	22G18	6900	Not.	measur	ed	11.0	7.9	10.6	20	
	Seven Lakes No. 1	22G10	6800		rt dela		50.9				
	Big Red Mtn.	22G21	6500		ort dela	•	25.4		18.1**		
	Little Red Mtn.	22G22	6500		rt dela		29.6				
	*Park Headquarters	22G5	6450	1-31	79	25.7	50.2		38.2**		
•		22H1	6200	Not	measur	ed			18.2**		
	Seven Lakes No. 2	22G11	6200	Repo	ort dela	ayed	31.8	22.7	18.7**	13	
	#Not located direc	+1 Tr on +	hie da	ninaga s	220						

**Not located directly on this drainage area.

**Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

**Relocated 1956



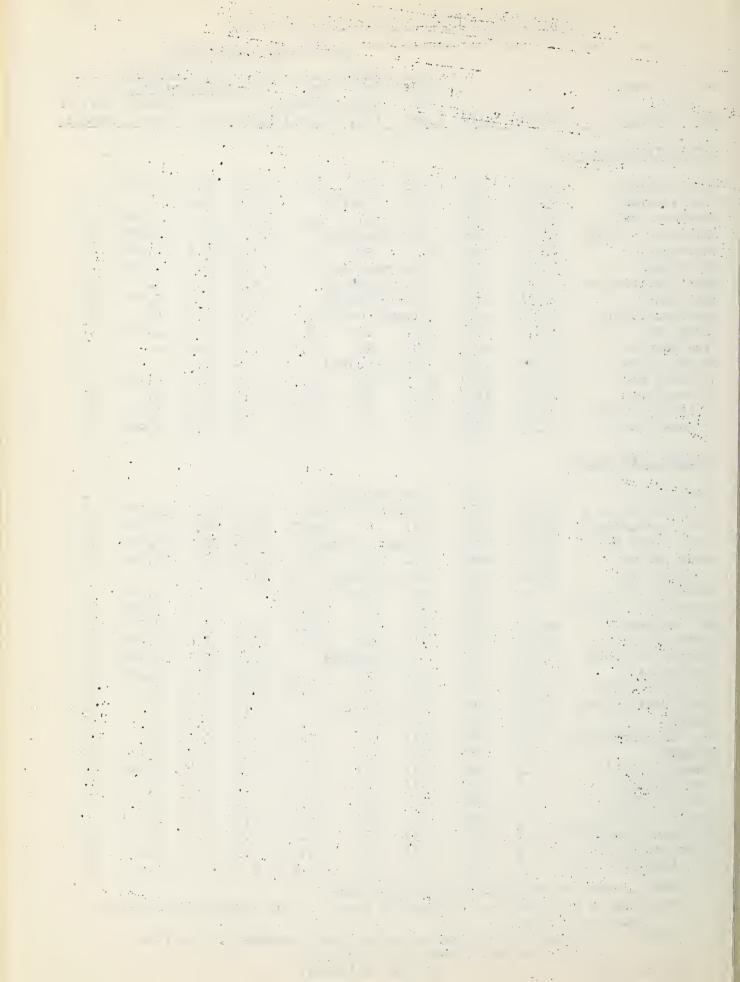
			SNOW COVER MEASUREMENTS						
			-	1957				Record	
DRAINAGE BASIN	No.		Date	Snow	Water		Conte	ent(In.)	
and	or	***	of		Conten		2055	1938-52	
SNOW COURSE	State	Elev.	Survey	(In.)	(In.)	:1956	1955	Avg.	Record
ROGUE RIVER (Cont'd	<u>l.)</u>								
*Annie Spring	22G6	6018	1-31	59	19.5	42.0	21.0	27.6**	22
*Fourmile Lake	22G12	6000	Not	measure	ed	31.6	9.4		4
Grayback Peak	23G3	6000	2-4	41	12.5	27.1	16.6	14.1**	18
Billie Cr. Divide	22G13	5300	Not	measure	ed	26.5	12.1	13.8**	23
Whaleback	22Gl	5140	2-2	59	16.0	31.4	19.1	23.8**	17
Hobart Lake	22G17	5010		measure		2.8	2.4	6.3**	9
*Hyatt Prairie Res.	22G16	4900		measure		8.0	4.7	6.5	22
Fish Lake Siskiyou Summit	22G14 22G20	4865		measure		12.8	8.9	7.8**	23
Althouse	23G4	4630 4400	1-31	rt dela 19	3.9	5.6 2.7	4.4 3.1	5•5 4•2**	20 18
Page Mountain	23G5	4045	1-31	24	5.0	1.6	4.4	4.2	2
Oregon Caves	23G6	4000	_	measure			2.4		ĩ
Goolaway Mtn.	23G2	3780	2-1	32	7.7	4.0	6.0	4.3**	12
Silver Burn	22G2	3720	1-31	28	6.2	11.2	9.3	8.4	19
South Fork Canal	22G9	3500	1-31	13	3.0	0.5	3.3	3.2	19
Goolaway Gap	23G1	3050	2-1	19	5.2	1.0	2.8	1.8%%	12
KLAMATH LAKE BASIN									
Summer Rim	20G2	7200	Mad						7
Seven Lakes No. 1	23G10	6800		measure ort dela		FO 0	29.8	21.2**	1 12
Park Headquarters	22G5	6450	1-31	79	25.7	50.9 50.2	27.0	38.2**	11
Seven Lakes No. 2	22G11	6200	_	ort dela		31.8	22.7	18.7**	13
Annie Spring	22G6	6018	1-31	59	19.5	42.0	21.0	27.6**	22
Fourmile Lake	22G12	6000		measure	- 4	27 6	9.4		4
Strawberry	20G9	5600	2-4	18	4.2b		4.1	5.9**	11
*Quartz Mtn. (COPCO)	-	5504	2-1	14	3.0		5.0	5.5**	25
Sun Mountain	21G2	5350	1-30	44	13.4	30.4	11.5	17.7	19
*Quartz Mountain	20G6	5320	2-1	13	3.4	6.5	5.0	4.8**	27
Billie Cr. Divide	22G13	5300		measure		26.5	12.1	13.8**	
Taylor Butte	21G3	5100	1-31	17	3.7	9.3	3.4	3.4**	17
Lake of the Woods Hyatt Prairie Res.	22G15 22G16	4960	1-31	17	3.5ª		8.6	7.3	20
Gerber	21G4	4900 4850	1-21	measure		8.0	4.7	6.5	22
Bly 101 Ranch(COPCC		4800	1-31	7 12	2.1	2.9 2.0	3.2 1.5	1.7	7 30
Chemult	21F11	4760	1-31	19	4.7	13.5	5.7	8.5	20
Yamsey (COPCO)	12	4600	1-31	13	3.5	4.5	3.8	2.8**	26
Kirk (COPCO)	6	4533	1-31	26	4.7	9.9	7.0	5.3	30
Beatty (COPCO)	1	4300	1-31	4	0.8	0.6	0.6	0.4	29
Crystal (COPCO)	. 4	4200	1-31	21	5.1	10.8	7.4	6.2	27
Harriman Lodge (COP		4200	1-31	24	4.1	5.0	5.5	3.4	30
Chiloquin (COPCO)	3	4187 4150	1-31	13	3.6	1.5	1.0	2.2	27
Fort Klamath (COPCO)) 5		1-31	21	5.8	2.7	3.8	3.6	30

*Not located directly on this drainage area.

^{**}Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

⁽COPCO) - Water content determined by melting a measured sample (The California Oregon Power Co.'s Station).

a Telegraphic bPartly estimated.



		SNOW COVER MEASUREMENTS							
DDATE OF DAGTE				1957			177	Record	
DRAINAGE BASIN	No.		Date		Water		Conte		Previous
and SNOW COURSE	or State	177	of		Content		3055		Yrs. of
SNOW COURSE	State	Elev.	Survey	(In.)	(In.)	:1956	1955	Avg.	Record
	Ī	NTE	RIOR	DR.	A I N A	GE			
GOOSE LAKE BASIN									
Camas Creek	20G8	5720	2-1	20	4.3.	14.4	7.1	7.5**	18
Strawberry	20G9	5600	2-4	18	4.2b		4.1	5.9**	11
Quartz Mtn.(COPCO)	9	5504	2-1	14	3.0		5.0	5.5**	25
Quartz Mountain	20G6	5320	2-1	13	3.4	6.5	5.0	4.8**	27
WARNER LAKE BASIN									
*Camas Creek	20G8	5720	2-1	20	4.3	14.4	7.1	7.5**	18
02 00 tt	2000	7120	χ- <u>1</u> ί	20	4.0	Trt • rt	/ 6 4	1.5	10
CHEWAUCAN RIVER			e de la companya de l						
Summer Rim	20G2	7200	Not.	measure	d				1
Quartz Mountain	20G6	5320	2-1	13	3.4	6.5	5.0	4.8%	27
					7.4	••>	,,,	7.0	~1
SILVER LAKE BASIN	,								
4					,				
Silver Creek	21F12	4900	2-1	18	2.6b	3.8	2.0	2.9**	16
HARNEY BASIN									
Blue Mtn. Springs	18E16	5900	1-30	26	6.6	14.6	7.0	10.2	25
Izee Summit	19E9	5293	1-31	18	3.3	8.6	4.5	6.0	20
Idlewild Camp	18F3	5200	1-31	14	1.5	5.8	3.5	4.0	24
Starr Ridge	19E7	5156	1-31	12	2.1	7.5	3.0	4.3	20
Lake Creek	18E18	5120	1-30	20	5.1		8.0		4
Rock Spring	18F1	5100	1-31	14	1.5	7.3	3.6	4.1	21
Stinking Water	18F4	4800	2-1	15	3.3	4.4	3.9	3.6	18

*Not located directly on this drainage.

^{**}Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

⁽COPCO) - Water content determined by melting a measured sample (The California Oregon Power Co.'s Station).

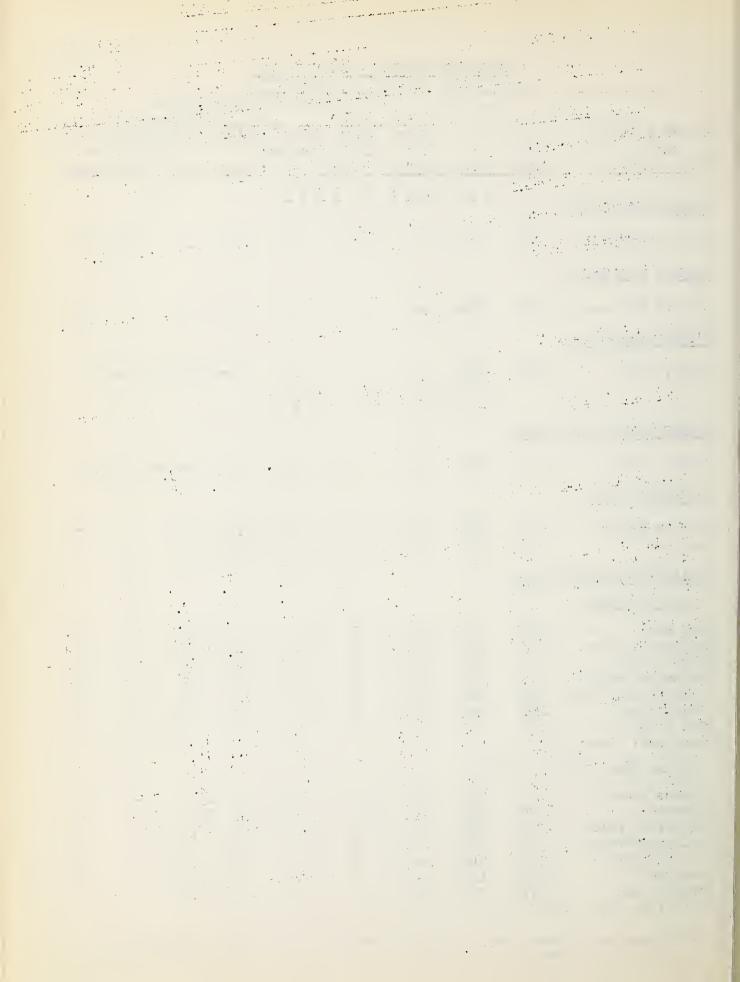
aTelegraphic.

bPartly estimated.

* in distribution of the second The second secon i de la compania La compania La compania de la compania security of the ា នៅដែល A SECTION OF THE SECT iida A. april 1 . 18,000 And the second second elimber of the second of the s and the second in the second se * 32. 11.4 (No. 1) (1) (H) and the second

	0101	don eno			21.120 0.				
				SNOW COVER MEASUREMENTS 1957 Past Record					
DRAINAGE BASIN	No.		Date	1957 Snow	Water	:Water			Previous
and	or		of	Depth	Content	::		1938-52	Yrs. of
SNOW COURSE	State	ELev.	Survey	(In.)	(In.)	:1956	1955	Avg.	Record
GRANDE RONDE RIVER		JAN	<u>u a r y</u>	1, 1	257				
Beaver Reservoir	18D9	5340	1-6	13	6.7	6.2	1.7	5.2***	17
KLAMATH LAKE BASIN									
Lake of the Woods	22G15	4960	1-7	0	0.0		8.4	3.8	19
SILVER LAKE BASIN									
Silver Creek	22F12	4900	1-3	0	0.0	No	Previ	ous Rec	ord
		JANU	ARY	15,	1957				
OWYHEE AND MALHEUR	RIVERS								
Shumway Ranch	17F1	4500	1-17	4	1.0	No	. Prev	ious Re	cord
DESCHUTES RIVER									
Cascade Summit Hogg Pass	22F3 21E6	4880 4755	1-15 1-15		9.2 15.2	24.2 31.8	13.0 18.6		6
WILLAMETTE VALLEY S	TREAMS								
SANTIAM RIVERS									
Hogg Pass Santiam Junction Marion Forks	21E6 21E5 21E4	4755 3990 27 3 0	1-15 1-15 1-15	57 27 15	15.2 5.7 3.0	31.8 19.4 10.8		 	6 6 6
Whitewater Bridge Detroit (new town)	21E3 22E1	2175 1500+	1-15 1-15	8 T	2.0 T	4.7 0.0	4.2		8 8
Detroit Dam	22E2	1580	1-15	T	T	0.0	2.0		7
Mill City Snow Line: About 1	22E3 1580 !	826	1-15	0	0.0	0.0	0.0		6
MIDDLE FORK WILL	METTE R	IVER							
Cascade Summit	22F3	4880	1-15	35	9.2	24.2			6
Champion Salt Creek Falls	22F9 22F4	4500 4000	1-15 1-15	25 10	4.7 2.0	16.1	14.0 8.6		7 8
Railroad Overpass	22F5	2750	1-15	T	T	0.0	2.0	***	8
McCredie Spring Oakridge	22F6 22F7	2121 1310	1-15 1-15	TO	T 0.0	0.0	0.0		8 7
Meridian Dam Snow line: About 2	22F8	750	1-15	Ō	0.0	0.0	0,0		5

^{**}Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.



				S	NOW COVE	R MEAS	UREMENTS			
				1957				Record		
DRAINAGE BASIN	No.		Date	Snow				ent(In.)		
and	or		of		Content				Yrs. of	
SNOW COURSE	State	Elev.	Survey	(In.)	(In.)	:1956	1955	Avg.	Record	
	2	JANU	<u>A</u> <u>R</u> <u>Y</u>	<u>1</u> <u>5</u> ,	1227	-				
WILLAMETTE VALLEY S	TREAMS	(Cont'd	.)							
COAST FORK WILLAM	ETTE RI	VER								
Champion	22F9	4500	1-15	25	4.7	16.1	14.0		7	
Golden Curry Creek		3136	1-15	7	1.8	2.6	3.8			
Weaver Creek	22F11	2440	1-15	Ó	0.0	0.0	2.0		5 5	
Lund Park	22F12	1740	1-15	0	0.0	0.0	0.0		5	
Layng Creek R.S. Snow Line: About 2	22F13 800'	1200	1–15	0	0.0	0.0	0.0		4	
UMPQUA RIVER										
Diamond Lake	22F18	5315	1-15	27	7.3	15.8		14.4**	13	
Champion	22F9	4500	1-15	25	4.7	16.1	14.0		7	
ROGUE RIVER										
Siskiyou Summit	22G20	4630	1-13	10	2.1	5.2	3.3		8	
KLAMATH LAKE BASIN										
Quartz Mtn. (COPCO)	9	5504	1-15	10	1.6	7.0	4.0		26	
Quartz Mtn.	20G6	5320	1-15	8	1.3		Previ	ous Reco		

^{**}Average is for less than 15 years of record in the 1938-52 period but not less than 5 years.

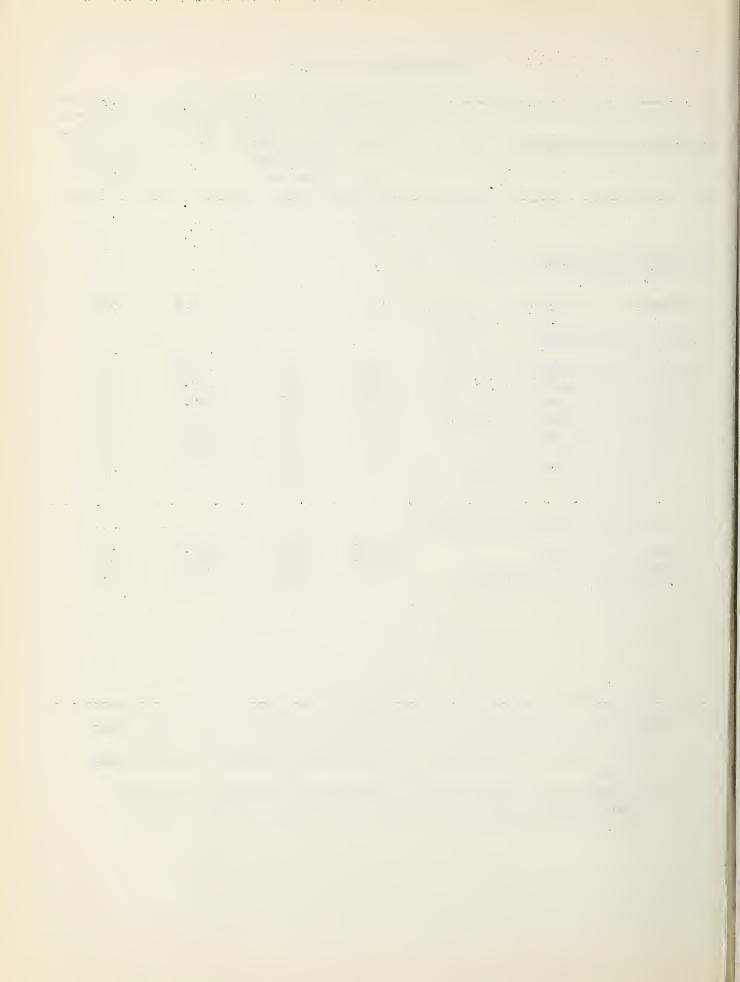
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CURRENT OREGON STREAMFLOW

		flow in Thous		
		Jan. 1957		
BASIN, RIVER and STATION	Total			
		of 1933-52		of 1938-52
		Average		Average
				
UPPER COLUMBIA DRAINAGE (Lower				
Snake in Oregon)				
Owyhee Res. net inflow	80.3	96	16.3	56
Owynee ites. Het Initow	ر.00	/0	10.0	
LOWER COLUMBIA DRAINAGE				
German . No Art School St. 17 Majo 1999 . of 666 2 Apr. M. Jeff Apr. at 1880 Apr. a				
Umatilla R. nr. Umatilla	62.9	65	9.2	26
John Day R. at Service Cr.	139.2	63	29.2	
Deschutes R. at Moody	1382.0	107 81	354.8 43.4	
Hood R, and conduit nr, Hood R. Willamette R, at Salemb	232 . 5 5584 . 0	73	1167.0	
Willamette R. at Salem	3583.0	78	730.0	_
M.F. Willemette R. below	728.0	94	107.0	45
North Fk.	120,0	7-7		72
CREGON AND CALIFORNIA COAST DRAINAGE				
II II. III.	3052 0	da.	100.0	177
Umpqua R. nr. Elkton	1953.0 826.0	8 <u>1</u> 11.0	422.3 172.2	47 65
Rogue R. at Raygold Upper Klamath Lake net inflow	820.U 582.1	139	138.5	119
obber gramaon rake nec fullow	702.1	107	T)0.5	117

bStroamflow adjusted for storage in those of the following reservoirs which are above the station; Lookout Point, Detroit, Fern Ridge, Cottage Grove and Doresa.

aPreliminary data supplied by: U. S. Geological Survey, Current Records Center, Portland, Oregon; The California Oregon Fower Co., Medford, Oregon; and North and South Beards of Control, Owyhee Project, Nyssa, Oregon.



OREGON PRECIPITATIONa

	FAI	L	·	
DRAINAGE		Nov.1956	DecJan	. 1956-157
DIVISIONS	Observed	Departureb	Observed	Departureb
Southeastern	3.41	+0.57	2.10	-0.60
Blue Mountains	3.68	-1.69	3.62	-1.19
Wallowa Mountains	4.04	-1.88	4.52	+0.23
Lower Columbia	2.65	-2.58	3.26	-1.71
Upper Deschutes	2.62	-1.29	2.21	-1.76
Willamette Valley	12.21	-4.24	11.42	-4.17
Southwestern	6.90	-0.45	6.03	-2.32
South-Central	3.76	+0.12	2.58	-1.13
	A			

Southeastern - Owyhee and lower Malheur drainages.

Blue Mountains - Upper valleys of the Umatilla, John Day and Malheur, and the Powder, Burnt and Silvies drainages.

Wallowa Mountains - Imnaha, Wallowa and Catherine drainages.

Lower Columbia - Lower valleys of the Walla Walla, Umatilla,
John Day and Deschutes, and the Hood and Sandy
drainages.

Upper Deschutes - Upper Deschutes and Crooked drainages.

Willamette Valley - All Willamette drainages.

Southwestern - Umpqua, Rogue and Williamson drainages.

South-Central - Sprague, Lost and Interior Basin drainages.

a - Preliminary analysis by U. S. Weather Bureau.

Departure from 15-year (1938-52) drainage division average.

Note - Precipitation shown in inches.

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The following organizations cooperate in the Oregon snow survey work:

STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers
Soil Conservation Districts of Oregon

FEDERAL

Department of Agriculture Cooperative Extension Service Forest Service Soil Conservation Service Department of Commerce

Department of the Interior Bonneville Power Administration Bureau of Reclamation

Fish and Wildlife Service Geological Survey Indian Service

National Park Service Department of National Defense

Army Engineer Corps

Weather Bureau

PUBLIC UTILITIES

California-Pacific Utilities Company Pacific Power and Light Company Portland General Electric Company The California Oregon Power Company

MUNICIPALITIES

City of Baker City of La Grande City of The Dalles City of Walla Walla

IRRIGATION DISTRICTS

Associated Ditch Companies Central Oregon Irrigation District Deschutes County Municipal Improvement District East Fork Irrigation District Grants Pass Irrigation District Jordan Valley Irrigation District Lakeview Water Users, Incorporated Medford Irrigation District North Unit Irrigation District North Board of Control - Owyhee Project Ochoco Irrigation District Rogue River Irrigation District South Board of Control - Owyhee Project Talent Irrigation District Vale-Oregon Irrigation District Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company
The Crag Rats, Hood River, Oregon

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Federal - State - Private COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"